

**ISTITUTO ISTRUZIONE SUPERIORE**

**“A. MEUCCI” - MASSA**  **(MS)**



**1° simul. TERZA PROVA classe V AM**

## TIPOLOGIA B *DURATA : 2 ORE*

#### 21 marzo 2017

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| CANDIDATO\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| INGLESE |  | /15 | |
| MECCANICA |  |
| STORIA |  |
| MATEMATICA |  |
| TECNOLOGIA MECCANICA |  |
| PUNTEGGIO TOTALE |  | |  |

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**Non sono assolutamente consentite cancellazioni e/o correzioni, pena l’annullamento del quesito.**

E’ consentito l’uso: - di calcolatrice scientifica

**MATEMATICA**

1. Data la funzione y = x2 + 1 , calcolare il volume del solido ottenuto facendo ruotare intorno all’asse x , di un giro completo, il trapezoide esteso all’intervallo [ 1, 2 ] .
2. Risolvere il seguente integrale definito
3. Risolvere il seguente integrale indefinito dx

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| Domanda 1 | Domanda 2 | Domanda 3 |
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**TECNOLOGIA MECCANICA DI PROCESSO E DI PRODOTTO**

Perché la zincatura galvanica, detta anche “a freddo”, ha minor resistenza di quella eseguita a caldo, per immersione ?

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Quale tipologia di rettifica in tondo si deve usare per rettificare un albero “snello” e perché si deve procedere con tale tecnica ? (motivare la risposta)

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Quali sono le differenze tra le funzioni ISO per M.U. a CNC usate per cicli multipli ripetitivi, G71 e G72 ed in quali casi si sceglie preferibilmente tra le due ?

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Valutazione

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**INGLESE**

1. Which are most important material removal processes?

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1. What are the basic rules to be followed to promote safety in the workplaces?

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1. Why are Asimov’s Laws of Robotics important?

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**STORIA**

1. Che cosa è il “ New Deal ” e che cosa fece il presidente americano per attuarlo?

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1. Delinea le cause che portarono alla scissione dell’Aventino e le conseguenze

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1. Delinea le tappe che portarono alla costruzione dello stato totalitario nazista.

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**MECCANICA**

1) Quale è il procedimento di calcolo di una biella veloce?

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1. Dopo aver illustrato le caratteristiche costruttive e di funzionamento di un volano, quali sono le verifiche da fare per un volano a razze?

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1. Quale è il significato della rigidezza e del fattore di utilizzazione di una molla? Quali sono le caratteristiche degli acciai per molle? Quale è il procedimento per la progettazione di una molla ad elica?

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**Valutazione**

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GRIGLIA DI VALUTAZIONE PER LA TERZA PROVA – TIPOLOGIA B

**(SINGOLA DOMANDA)**

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| **CONOSCENZA**  **6 Punti** | | **ESPOSIZIONE**  **3 Punti** | | **PERTINENZA**  **6 Punti** | | **TOTALE** |
| Nessuna | **1** | Frammentaria e superficiale | **1** | Errata | **1** | **/15** |
| Frammentaria e superficiale | **2** | Approssimativa | **2** |
| Non approfondita | **3** | Terminologia accettabile | **2** | Parziale | **3** |
| Discreta | **4** | Sufficiente corrispondenza | **4** |
| Buona | **5** | Corretta ed appropriata | **3** | Buona corrispondenza | **5** |
| Completa ed approfondita | **6** | Perfetta corrispondenza | **6** |
| **RISPOSTA NON DATA A SINGOLA DOMANDA PUNTI 1**  **NESSUNA RIPOSTA PER TUTTE LE 3 DOMANDE PUNTI 1** | | | | | | |

## GRIGLIA PER ATTRIBUZIONE PUNTEGGIO PER LA TERZA PROVA

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| **PUNTEGGIO**  **FINALE** | **Voto in**  **quindicesimi** |
| **211 ÷ 225** | **15** |
| **196 ÷ 210** | **14** |
| **181 ÷ 195** | **13** |
| **166 ÷ 180** | **12** |
| **151 ÷ 165** | **11** |
| **136 ÷ 150** | **10** |
| **121 ÷ 135** | **9** |
| **106 ÷ 120** | **8** |
| **91 ÷ 105** | **7** |
| **76 ÷ 90** | **6** |
| **61 ÷ 75** | **5** |
| **46 ÷ 60** | **4** |
| **31 ÷ 45** | **3** |
| **16 ÷ 30** | **2** |
| **1 ÷ 15** | **1** |
| SUFFICIENZA 10 PUNTI | |